

**“CERTIFICATION OF  
PETROLEUM RESERVES  
EVALUATORS:  
The Time Has Come”**

**Presented to  
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# DISCLAIMER

The opinions expressed herein are those of the presenter and do not necessarily represent the views or positions of any other individuals or organizations



# WHAT STANDARDS ARE MANDATED FOR RESERVES ESTIMATORS BY THE US SEC?

- ◆ There are NO statutory requirements in the US relating to the qualifications of employees preparing reserves estimates for public companies
- ◆ Individual companies are assumed to have established internal standards and requisite training
- ◆ Consulting firms must employ at least ONE state-licensed engineer



# A BIT OF HISTORY

- ◆ “Under Roger, King of Norway. doctors in 1104 were required to be examined and certified by their peers before they were allowed to offer their services to the public.”

Source: Engineering Registration Committee – SPE - 1999



# What Certification is not

- ◆ Certification of reserves evaluators is not a form of licensing
- ◆ Certification confers no rights nor privileges
- ◆ Certification is not designed to create business for consultants
- ◆ Certification is not designed to expand membership in any organization
- ◆ Certification is not primarily focused on SEC reporting



# What Certification is not – cont'd

- ◆ Certification will not bring “accuracy” to reserves estimation and reporting – estimates remain estimates and will always contain uncertainty!
- ◆ Certification is not envisioned to compete with nor replace other recognitions of professional competence
- ◆ Certification involves *training* about reserves evaluation and not about *teaching* geoscience and engineering fundamentals



# WHAT THEN IS CERTIFICATION?

- ◆ The awarding of a certificate simply means that a qualified individual has successfully completed a course of study and an open-book examination demonstrating his/her understanding of industry-approved materials
- ◆ The maintenance of a certificate will require annual continuing education
- ◆ No “grandfathering”



# AND NOW, WHY CERTIFICATION?

- ◆ Landmen can become certified
- ◆ Geologists can obtain certification
- ◆ Accountants can become certified
- ◆ A “reserves engineer” has NO opportunity to attain the same level of professionalism
- ◆ Reserves evaluators will never be respected as professionals (in my opinion) until we elevate ourselves as professionals using industry recognized standards





# AND NOW, WHY CERTIFICATION - cont'd?

- ◆ Obvious to many that industry has failed to maintain training of qualified individuals – both geoscientists and engineers – in sufficient depth to consistently produce reserves estimates that meet the needs of industry, investors and regulators
- ◆ Training within companies – producers and consultants – is erratic and inconsistent – and sometimes shallow
- ◆ “Shallow” relates both to depth of training and reach within the company



# AND NOW, WHY CERTIFICATION? – Cont'd

- ◆ Users of reserves information have no way to be assured that reserves evaluators have been properly trained beyond the company saying so.
- ◆ Significant progress is being made –but slowly – as result of the Sarbanes-Oxley Act of 2002
- ◆ A reservoir engineer or geoscientist requires additional training to become a reserves evaluator



# AND NOW, WHY CERTIFICATION? - Cont'd

- ◆ Given the economic consequences of the work of reserves evaluators, professional worldwide reserves estimation “recommended practices” should be developed and made available to those who choose to participate
- ◆ Most of the required study materials comprising such standards exists in the form of AAPG/SPE/SPEE/ASC papers and publications and in industry training materials
- ◆ Collecting, screening and compiling this information into a coherent “recommended practices” manual is Step 1.

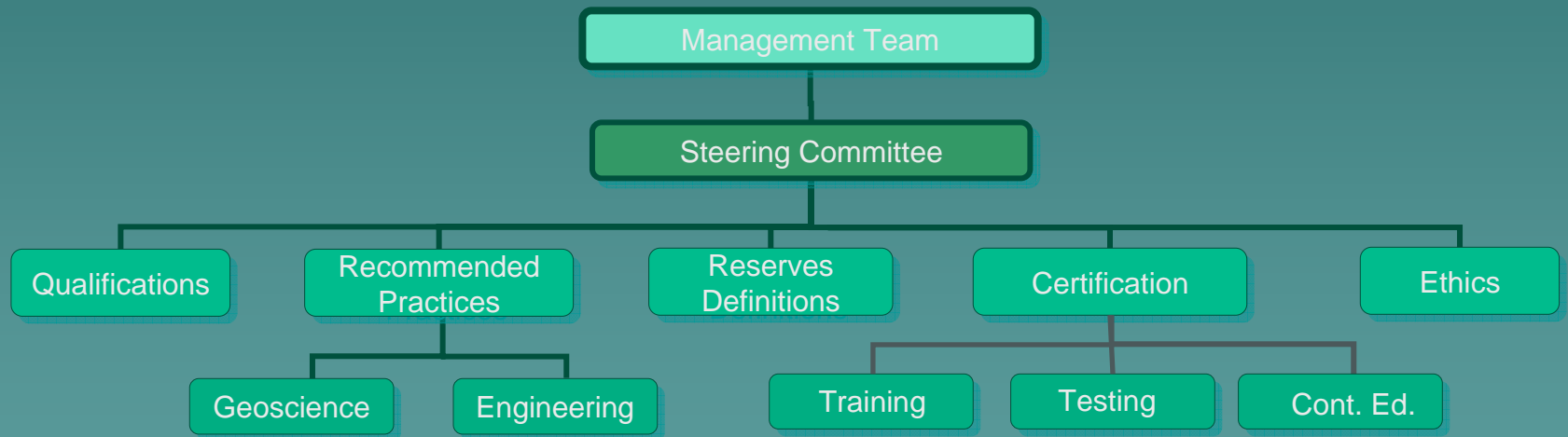


# ORGANIZATIONAL STRUCTURE

- ◆ Management Team
- ◆ Steering Committee (Chairs of below)
  - (A) Qualifications
  - (B) Recommended practices for
    - (1) geoscientists
    - (2) engineers
  - (C) Reserves definitions
  - (D) Ethics training
  - (E) Examination/certification/CE



# ORGANIZATION CHART



# Committee Chairmen

- ◆ Qualifications – Ken Mallon – AAPG
- ◆ Ethics – Scott Hickman – SPE/SPEE
- ◆ Definitions – Claude McMichael –SPE/AAPG
- ◆ Recommended practices
  - (a) Engineering – Curtis Phillips – SPE
  - (b) Geoscience – Creties Jenkins - AAPG
- ◆ Certification
  - (a) Examination – open
  - (b) Continuing Education – open
  - (c) Certification – Rick Erickson- AAPG



# INITIATIVE PROGRESS TO DATE

- ◆ We have advanced far beyond the end of the beginning but not so far that we can see the beginning of the end



# A COMMENT ABOUT QUALIFICATIONS

- ◆ Program designed to admit only competent reservoir engineers and geoscientists as recognized by their peers
- ◆ “Competent” definition open to debate
- ◆ Study materials created to enable qualified reservoir engineer to become a “reserves engineer” equipped to prepare reserves reports and evaluations
- ◆ The term “evaluations” herein does not necessarily equate to market appraisals or estimating of FMV





# A COMMENT ABOUT ETHICS TRAINING

- ◆ Suggest training in “applied ethics” such as independence of internal or external evaluators
- ◆ Ethics related to litigation
- ◆ Ethics related to professional qualifications
- ◆ Ethics related to unitization, equity determination
- ◆ Ethics related to conflicts, and on and on and on.....



# COMMENTS ABOUT ENGINEERING RECOMMENDED PRACTICES STUDY SOURCES

- ◆ ASC Oil & Gas Reserves Handbook (2002)
- ◆ Numerous SPE, SPEE, AAPG, OTC papers
- ◆ Company reserves manuals and training materials
- ◆ Attention to simulation, probabilistics, CBM, seismic, EOR, software, etc
- ◆ Terms – reviews, audits, determinations



# COMMENTS ABOUT DEFINITIONS

- ◆ Expand understanding and differences of SPE/WPC, ASC, SEC, UK, HK, FSU and other relevant definitions
- ◆ Prepare template that provides a visual and functional comparison of relevant definitions



# ACCESSIBILITY/AVAILABILITY

- ◆ Conceived to be web-based and accessible to any qualified person
- ◆ All study documents to be available in digital form (at nominal cost)
- ◆ Examination designed by relevant committee to assure comprehension and understanding
- ◆ Open-book examination may require proctoring or affidavit of respected person observing examination conduct

# EXAMINATION CONCEPT

- ◆ Multiple choice questions prepared by committees to measure adequacy of understanding of study materials
- ◆ Will need some oversight of education professionals to ensure acceptability of results
- ◆ Applicant must confirm his/her study and understanding of all course materials and be deemed ready for the examination
- ◆ Applicant to be given password to allow entry into test site
- ◆ Exam begins with random assignment of questions for each section of study and under oversight of a "respected person" who attests to examination conditions including time limitations



# UNANSWERED QUESTIONS SO FAR

- ◆ Cost to applicant
- ◆ Launch date – US “beta testing”?
- ◆ Development budget – AAPG/SPEE
- ◆ Level of SPE support
- ◆ Grievance process
- ◆ Re-certification schedule – annual, longer?
- ◆ “EIT” program for presently unqualified individuals?
- ◆ Compatibility with existing AAPG program to certify petroleum geologists



# WHERE IS SUPPORT COMING FROM?

- ◆ Program is driven by motivated professionals as individuals and not by companies
- ◆ Active committee members, observers and supporters come from all industry segments – supermajors, independents, NOCs, WPC, bankers, educators, regulators, accounting firms, consultants and professional associations



# OUTSIDE RECOGNITION

## MAJOR ENDORSEMENT BY DELOITTE & TOUCHE ON FEBRUARY 10, 2005 (cont.)

- **"In our view, the first and most important step in improving assurance and restoring confidence is for market regulators and accounting standard setters to require that reserves estimates disclosed in annual reports be prepared by suitably "certified" engineers in accordance with the standards and guidelines set out by the SPE/SPEE. 'Certified' engineers in this context will thus include oil companies' internal employees and/or those engaged through petroleum engineering consulting firms"**





# Testimony of Professor Dharan

## July 24, 2004 US House Hearing

Testimony of Bala Dharan:

- ◆ (a) “The quality credibility (gap) which affects the relevance of the reserves information is caused by a lack of common technical standards and lack of training and certification programs to propagate the standards among all evaluators. There is also no industry-wide peer review or monitoring program.”
- ◆ (b) “The reporting credibility (gap) which affects reliability is caused by the fact that reserves disclosures are not audited by external or independent reserves evaluators. Rather than relying on continued luck, it is preferable for the industry to seriously consider proposals for certification and reserves audit.”



# Testimony of Dr. Dharan – cont'd

- ◆ (c) “The first proposal is to require a certification program for reserves evaluators. Several industry leaders have called for certification requirements. Also, ethics education needs to be part of the training.”
- ◆ (d) “The second proposal, to improve the reliability of the reserves is to require an independent reserves audit.”
- ◆ (e) “The third proposal is for the separation of the reserve auditing function from the reserves consulting
- ◆ (f) “Fourth, the industry and the SEC need to adopt a principle-based approach.”



# ARE THERE CRITICS AND “NON-BELIEVERS” ?

- ◆ Program deemed unnecessary by some who do not recognize a problem
- ◆ Some experienced evaluators strongly resist the examination requirement
- ◆ Some say state licensing is adequate
- ◆ Some fear that the initial “Voluntary” program will become a requirement by their employer or client
- ◆ And others seem to simply resist change and are comfortable with the “status quo”



# SOME FINAL QUESTIONS TO PONDER

- ◆ Should independent reserves reports be signed by both geoscientists and engineers in most cases?
- ◆ Should other organizations be invited as co-sponsors? SPWLA, SEG, WPC, others? Who do you suggest?
- ◆ What are your primary concerns about the initiative?



# SURVEY RESPONSES TO DATE

- ◆ Austin SPEE 03/22/05
- ◆ Dallas HEES 04/04/05
- ◆ Denver SPEE 04/13/05



# DALLAS SPE/HEES 04/05

## 69 individual responses

### ◆ From Industry Perspective

No opinion on program	7%
See no need	10%
See some need	58%
See strong need	22%
Should resist	2%

### ◆ From Personal Perspective

Not Applicable	12%
Will consider	34%
Will seek	43%
Training only	7%
No way !!	3%



# 2005 Major Speaking Opportunities About Certification et al

- ◆ May 2005 OTC in Houston
- ◆ April-July 4 engagements in London
- ◆ September 18<sup>th</sup> WPC in Johannesburg
- ◆ October SPE Annual Conference
- ◆ November SPE Middle East - Qatar



# AND IN CONCLUSION

THANK YOU  
FOR LISTENING AND  
FOR YOUR INTEREST  
AND SUPPORT IN  
THIS REVOLUTIONARY  
EFFORT

